

SEQUENCE LISTING

<110> Gerald, Christophe P.G.
Jones, Kenneth A.
Bonini, James A.
Borowsky, Beth

<120> DNA Encoding Mammalian Neuropeptide FF (NPFF) Receptors
and Uses Thereof

<130> 1795/57155-A

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<150> 09/161,113

<151> 1998-09-25

<160> 42

<170> PatentIn Ver. 2.0 - beta

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<211> 1410
<212> DNA
<213> Rattus norvegicus

<400> 1
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gacgtgcaac ccagcgactc cggcctgcca tcagagtctg gccccagcag cgggggtccca 1260
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gagaagggag ggccagtagt cctgtggccc 1410

<210> 2
<211> 432
<212> PRT
<213> Rattus norvegicus

<400> 2
Met Glu Ala Glu Pro Ser Gln Pro Pro Asn Gly Ser Trp Pro Leu Gly
1 5 10 15

Gln Asn Gly Ser Asp Val Glu Thr Ser Met Ala Thr Ser Leu Thr Phe
20 25 30

Ser Ser Tyr Tyr Gln His Ser Ser Pro Val Ala Ala Met Phe Ile Ala
35 40 45

Ala Tyr Val Leu Ile Phe Leu Leu Cys Met Val Gly Asn Thr Leu Val
50 55 60

Cys Phe Ile Val Leu Lys Asn Arg His Met Arg Thr Val Thr Asn Met
65 70 75 80

Phe Ile Leu Asn Leu Ala Val Ser Asp Leu Leu Val Gly Ile Phe Cys
85 90 95

Met Pro Thr Thr Leu Val Asp Asn Leu Ile Thr Gly Trp Pro Phe Asp
100 105 110

Asn Ala Thr Cys Lys Met Ser Gly Leu Val Gln Gly Met Ser Val Ser
115 120 125

Ala Ser Val Phe Thr Leu Val Ala Ile Ala Val Glu Arg Phe Arg Cys
130 135 140

Ile Val His Pro Phe Arg Glu Lys Leu Thr Leu Arg Lys Ala Leu Phe
145 150 155 160

Thr Ile Ala Val Ile Trp Ala Leu Ala Leu Leu Ile Met Cys Pro Ser
165 170 175

Ala Val Thr Leu Thr Val Thr Arg Glu Glu His His Phe Met Leu Asp
180 185 190

Ala Arg Asn Arg Ser Tyr Pro Leu Tyr Ser Cys Trp Glu Ala Trp Pro
195 200 205

Glu Lys Gly Met Arg Lys Val Tyr Thr Ala Val Leu Phe Ala His Ile
210 215 220

Tyr Leu Val Pro Leu Ala Leu Ile Val Val Met Tyr Val Arg Ile Ala
225 230 235 240

Arg Lys Leu Cys Gln Ala Pro Gly Pro Ala Arg Asp Thr Glu Glu Ala
245 250 255

Val Ala Glu Gly Gly Arg Thr Ser Arg Arg Arg Ala Arg Val Val His
260 265 270

Met Leu Val Met Val Ala Leu Phe Phe Thr Leu Ser Trp Leu Pro Leu
275 280 285

Trp Val Leu Leu Leu Ile Asp Tyr Gly Glu Leu Ser Glu Leu Gln
290 295 300

Leu His Leu Leu Ser Val Tyr Ala Phe Pro Leu Ala His Trp Leu Ala
305 310 315 320

Phe Phe His Ser Ser Ala Asn Pro Ile Ile Tyr Gly Tyr Phe Asn Glu
325 330 335

Asn Phe Arg Arg Gly Phe Gln Ala Ala Phe Arg Ala Gln Leu Cys Trp
340 345 350

Pro Pro Trp Ala Ala His Lys Gln Ala Tyr Ser Glu Arg Pro Asn Arg
355 360 365

Leu Leu Arg Arg Arg Val Val Val Asp Val Gln Pro Ser Asp Ser Gly
370 375 380

Leu Pro Ser Glu Ser Gly Pro Ser Ser Gly Val Pro Gly Pro Gly Arg
385 390 395 400

Leu Pro Leu Arg Asn Gly Arg Val Ala His Gln Asp Gly Pro Gly Glu
405 410 415

Gly Pro Gly Cys Asn His Met Pro Leu Thr Ile Pro Ala Trp Asn Ile
420 425 430

<210> 3
<211> 200
<212> DNA
<213> Homo sapiens

<400> 3

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gccccatgttca ttgtggccta tgcgctcatc ttccctgctct gcatggtggg caacaccctg 180
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<210> 4

<211> 66

<212> PRT

<213> Homo sapiens

<400> 4

Glu Pro Ser Gln Pro Pro Asn Ser Ser Trp Pro Leu Ser Gln Asn Gly
1 5 10 15

Thr Asn Thr Glu Ala Thr Pro Ala Thr Asn Leu Thr Phe Ser Ser Tyr
20 25 30

Tyr Gln His Thr Ser Pro Val Ala Ala Met Phe Ile Val Ala Tyr Ala
35 40 45

Leu Ile Phe Leu Leu Cys Met Val Gly Asn Thr Leu Val Cys Phe Ile
50 55 60

Val Leu

65

<210> 5

<211> 1302

<212> DNA

<213> Homo sapiens

<400> 5

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aatattacatc atgtgaacta ctatcttac cagcctcaag tggcagcaat cttcattatt 180
tcctactttc tgatcttctt tttgtgcattg atggaaata ctgtggtttg ctttattgtta 240
atgaggaaca aacatatgca cacagtcaact aatctttca tcttaaacctt ggcataagt 300
gatttactag ttggcatatt ctgcattgcct ataacactgc tggacaatat tatagcagga 360
tggccatttg gaaacacgtat gtgcaagatc agtggattgg tccaggaaat atctgtcgca 420
gcttcagtct ttacgttagt tgcaattgtt gtagataggt tccagtggtt ggtctaccct 480
tttaaaccaa agctcaactat caagacagcg tttgtcatta ttatgatcat ctgggtccctt 540
gccatcacca ttatgtctcc atctgcagta atgttacatg tgcaagaaga aaaatattac 600
cgagttagac tcaactccca gaataaaacc agtccagtct actgggtcccg ggaagactgg 660
ccaaatcagg aaatgaggaa gatctacacc actgtgtgtt ttgccaacat ctacctggct 720
ccctctccc tcattgtcat catgtatggaa aggattggaa tttcaactt cagggctgca 780
gttcctcaca caggcaggaa gaaccaggag cagtggcactg tgggtgtccag gaagaagcag 840
aagatcatta agatgtctt gattgtggcc ctgctttta ttctctcatg gctgccccctg 900
tggactctaa tgatgtctc agactacgtt gacctttctc caaatgaact gcagatcatc 960
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atcattttagt gtttcttcaa cgagaatttc cgccgtgggt tccaagaagc tttccagctc 1080
cagctctgcc aaaaaagagc aaaggctatg gaagctttagt ccctaaaagc taaaagccat 1140
gtgctcataa acacatctaa tcagcttgta caggaatcta cattcaaaa ccctcatggg 1200
gaaaccttgc tttatagaa aagtgctgaa aaaccccaac aggaattagt gatggaagaa 1260
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<210> 6
<211> 420
<212> PRT
<213> Homo sapiens

<400> 6
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Trp Asn Val Asn Asp Thr Lys His His Leu Tyr Ser Asp Ile Asn Ile
20 25 30

Thr Tyr Val Asn Tyr Tyr Leu His Gln Pro Gln Val Ala Ala Ile Phe
35 40 45

Ile Ile Ser Tyr Phe Leu Ile Phe Phe Leu Cys Met Met Gly Asn Thr
50 55 60

Val Val Cys Phe Ile Val Met Arg Asn Lys His Met His Thr Val Thr
65 70 75 80

Asn Leu Phe Ile Leu Asn Leu Ala Ile Ser Asp Leu Leu Val Gly Ile
85 90 95

Phe Cys Met Pro Ile Thr Leu Leu Asp Asn Ile Ile Ala Gly Trp Pro
100 105 110

Phe Gly Asn Thr Met Cys Lys Ile Ser Gly Leu Val Gln Gly Ile Ser
115 120 125

Val Ala Ala Ser Val Phe Thr Leu Val Ala Ile Ala Val Asp Arg Phe
130 135 140

Gln Cys Val Val Tyr Pro Phe Lys Pro Lys Leu Thr Ile Lys Thr Ala
145 150 155 160

Phe Val Ile Ile Met Ile Ile Trp Val Leu Ala Ile Thr Ile Met Ser
165 170 175

Pro Ser Ala Val Met Leu His Val Gln Glu Glu Lys Tyr Tyr Arg Val
180 185 190

Arg Leu Asn Ser Gln Asn Lys Thr Ser Pro Val Tyr Trp Cys Arg Glu
195 200 205

Asp Trp Pro Asn Gln Glu Met Arg Lys Ile Tyr Thr Thr Val Leu Phe
210 215 220

Ala Asn Ile Tyr Leu Ala Pro Leu Ser Leu Ile Val Ile Met Tyr Gly
225 230 235 240

Arg Ile Gly Ile Ser Leu Phe Arg Ala Ala Val Pro His Thr Gly Arg
245 250 255

Lys Asn Gln Glu Gln Trp His Val Val Ser Arg Lys Lys Gln Lys Ile
260 265 270

Ile Lys Met Leu Leu Ile Val Ala Leu Leu Phe Ile Leu Ser Trp Leu
275 280 285

Pro Leu Trp Thr Leu Met Met Leu Ser Asp Tyr Ala Asp Leu Ser Pro
290 295 300

Asn Glu Leu Gln Ile Ile Asn Ile Tyr Ile Tyr Pro Phe Ala His Trp
305 310 315 320

Leu Ala Phe Gly Asn Ser Ser Val Asn Pro Ile Ile Tyr Gly Phe Phe
325 330 335

Asn Glu Asn Phe Arg Arg Gly Phe Gln Glu Ala Phe Gln Leu Gln Leu
340 345 350

Cys Gln Lys Arg Ala Lys Pro Met Glu Ala Tyr Ala Leu Lys Ala Lys
355 360 365

Ser His Val Leu Ile Asn Thr Ser Asn Gln Leu Val Gln Glu Ser Thr
370 375 380

Phe Gln Asn Pro His Gly Glu Thr Leu Leu Tyr Arg Lys Ser Ala Glu
385 390 395 400

Lys Pro Gln Gln Glu Leu Val Met Glu Glu Leu Lys Glu Thr Thr Asn
405 410 415

Ser Ser Glu Ile
420

<210> 7
<211> 1293
<212> DNA
<213> Homo sapiens

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 cctgtggcgg ccatgttcat tgtggctat gcgctcatct tcctgtctg catgtggc 180
 aacaccctgg tctgttcat cgtgctcaag aaccggcaca tgcatactgt caccacatg 240
 ttcatcctca acctggctgt cagtgacctg ctggtgccc tcttctgcat gcccaccacc 300
 cttgtggaca acctcatcac tgggtggccc ttcgacaaatg ccacatgcaa gatgagcggc 360
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 aggttccgct gcatgtgca cccttccgc gagaagctga ccctgccc ggcgctcg 480
 accatcgccg tcatctggc cctggcgctg ctcatcatgt gtccctcgcc cgtaacgctg 540
 accgtcacc cgtgaggagca ccacttcatg gtggacgccc gcaaccgctc ctacccttc 600
 tactcctgtt gggaggcctg gcccggaaag ggcatgccc gggctacac cactgtgctc 660
 ttctcgacaca tctacctggc gcccgtggcg ctcatcg 720
 cgcaagctct gcccggcccc gggccggcc cccggggcg aggaggctgc ggacccgcga 780
 gcatcgccg ctagagcgcc cgtggtgcac atgctggtca tggtgccgt gttttcacg 840
 ctgtcctggc tggcgctctg ggcgtgtcg ctgctcateg actacggcga gtcagecg 900
 cccgagctgc acctggtcac cgtctacg 960
 aacagcagcg ccaacccat catctacggc tacttcaacg agaacttccg ccgcggcttc 1020
 caggccgcct tccgccccg cctctggccg cggccgtcg 1080
 tccgagcggc cccggggct tctgcacagg cgggtctcg tggtggtgcg gcccagcgcac 1140
 tccgggctgc cctctgagtc gggccctagc agtggggccc ccaggcccg ccgcctcc 1200
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 ctgcggatatac tga 1293

<210> 8

<211> 430

<212> PRT

<213> Homo sapiens

<400> 8

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Gln	Asn	Gly	Thr	Asn	Thr	Glu	Ala	Thr	Pro	Ala	Thr	Asn	Leu	Thr	Phe
									20				25		30

Ser	Ser	Tyr	Tyr	Gln	His	Thr	Ser	Pro	Val	Ala	Ala	Met	Phe	Ile	Val
									35			40		45	

Ala	Tyr	Ala	Leu	Ile	Phe	Leu	Leu	Cys	Met	Val	Gly	Asn	Thr	Leu	Val
									50			55		60	

Cys	Phe	Ile	Val	Leu	Lys	Asn	Arg	His	Met	His	Thr	Val	Thr	Asn	Met
									65			70		75	80

Phe	Ile	Leu	Asn	Leu	Ala	Val	Ser	Asp	Leu	Leu	Val	Gly	Ile	Phe	Cys
									85			90		95	

Met	Pro	Thr	Thr	Leu	Val	Asp	Asn	Leu	Ile	Thr	Gly	Trp	Pro	Phe	Asp
									100			105		110	

Asn Ala Thr Cys Lys Met Ser Gly Leu Val Gln Gly Met Ser Val Ser
115 120 125

Ala Ser Val Phe Thr Leu Val Ala Ile Ala Val Glu Arg Phe Arg Cys
130 135 140

Ile Val His Pro Phe Arg Glu Lys Leu Thr Leu Arg Lys Ala Leu Val
145 150 155 160

Thr Ile Ala Val Ile Trp Ala Leu Ala Leu Leu Ile Met Cys Pro Ser
165 170 175

Ala Val Thr Leu Thr Val Thr Arg Glu Glu His His Phe Met Val Asp
180 185 190

Ala Arg Asn Arg Ser Tyr Pro Leu Tyr Ser Cys Trp Glu Ala Trp Pro
195 200 205

Glu Lys Gly Met Arg Arg Val Tyr Thr Thr Val Leu Phe Ser His Ile
210 215 220

Tyr Leu Ala Pro Leu Ala Leu Ile Val Val Met Tyr Ala Arg Ile Ala
225 230 235 240

Arg Lys Leu Cys Gln Ala Pro Gly Pro Ala Pro Gly Gly Glu Glu Ala
245 250 255

Ala Asp Pro Arg Ala Ser Arg Arg Ala Arg Val Val His Met Leu
260 265 270

Val Met Val Ala Leu Phe Phe Thr Leu Ser Trp Leu Pro Leu Trp Ala
275 280 285

Leu Leu Leu Leu Ile Asp Tyr Gly Gln Leu Ser Ala Pro Gln Leu His
290 295 300

Leu Val Thr Val Tyr Ala Phe Pro Phe Ala His Trp Leu Ala Phe Phe
305 310 315 320

Asn Ser Ser Ala Asn Pro Ile Ile Tyr Gly Tyr Phe Asn Glu Asn Phe
325 330 335

Arg Arg Gly Phe Gln Ala Ala Phe Arg Ala Arg Leu Cys Pro Arg Pro
340 345 350

Ser Gly Ser His Lys Glu Ala Tyr Ser Glu Arg Pro Gly Gly Leu Leu
355 360 365

His Arg Arg Val Phe Val Val Val Arg Pro Ser Asp Ser Gly Leu Pro
370 375 380

Ser Glu Ser Gly Pro Ser Ser Gly Ala Pro Arg Pro Gly Arg Leu Pro
385 390 395 400

Leu Arg Asn Gly Arg Val Ala His His Gly Leu Pro Arg Glu Gly Pro
405 410 415

Gly Cys Ser His Leu Pro Leu Thr Ile Pro Ala Trp Asp Ile
420 425 430

<210> 9

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer/probe

<400> 9

gyntwyrynn tnwsntggght ncc

23

<210> 10

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer/probe

<400> 10

avnadngbrw avannanngg rtt

23

<210> 11

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer/probe

<400> 11

ttatgcttcc ggctcgatg ttgtg

25

<210> 12

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer/probe

<400> 12
atgtgctgca aggcgattaa gttggg 26

<210> 13
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer/probe

<400> 13
ggtgctgctg ctgctcatcg actatg 26

<210> 14
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer/probe

<400> 14
ttggcgctgc tgtggaagaa ggccag 26

<210> 15
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer/probe

<400> 15
cggtgctt cgcgcacatc tacc 24

<210> 16
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer/probe

<400> 16
tgccaagggg aaggcgtaga ccgacagcag gtgcagttgc agctcgatca gctccccata 60

<210> 17

<211> 53
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer/probe

<400> 17
ccacccttgt ggacaacctc atcactgggt ggcgcattcga caatgccaca tgc 53

<210> 18
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer/probe

<400> 18
ctgctctgca tggtgccaa cacc 24

<210> 19
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
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gacggcgatg gtgacgagcg c 21

<210> 20
<211> 65
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer/probe

<400> 20
gtcaccaaca tgttcatcct caacctggct gtcagtgacc tgctgggtggg catcttctgc 60
atgcc 65

<210> 21
<211> 24
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer/probe

<400> 21

gcgagaagct gaccctgcgg aagg

24

<210> 22

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer/probe

<400> 22

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24

<210> 23

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer/probe

<400> 23

cgtcatctgg gccgagggac acag

24

<210> 24

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer/probe

<400> 24

tgacggcgat ggtgacgagc gcc

23

<210> 25

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer/probe

<400> 25

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23

<210> 26

<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer/probe

<400> 26
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<210> 27
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer/probe

<400> 27
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<210> 28
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer/probe

<400> 28
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<210> 29
<211> 27
<212> DNA
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<220>
<223> Description of Artificial Sequence: primer/probe

<400> 29
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<210> 30
<211> 23
<212> DNA
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<223> Description of Artificial Sequence: primer/probe

<400> 30
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<210> 31
<211> 26
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<220>
<223> Description of Artificial Sequence: primer/probe

<400> 31
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<210> 32
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer/probe

<400> 32
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<210> 33
<211> 25
<212> DNA
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<220>
<223> Description of Artificial Sequence: primer/probe

<400> 33
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<210> 34
<211> 25
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<220>
<223> Description of Artificial Sequence: primer/probe

<400> 34
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<210> 35
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<212> DNA
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<220>
<223> Description of Artificial Sequence: primer/probe

<400> 35
gaccacacac tggaacctat ctac 24

<210> 36
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer/probe

<400> 36
gcaattgcaa ctaacgtaaa gactg 25

<210> 37
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer/probe

<400> 37
tagcaaggat ccgagggttca tcatgaatga gaaatgg 37

<210> 38
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer/probe

<400> 38
cttcatgaat tcgcgttagta gagttaggat tatcac 36

<210> 39
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer/probe

<400> 39
ctcctactac caacactcct ctcc 24

<210> 40
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer/probe

<400> 40
acgggttacg agcatccag 19

<210> 41
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer/probe

<400> 41
gatcagtgga ttggccagg gaatatc 27

<210> 42
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer/probe

<400> 42
ccaggttagat gttggcaaac agcac 25